

Student Perspectives Toward the Quality of E-Commerce Website

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Abstract— The use of the internet technology in business activities has speedily changed employing electronic commerce (E-commerce). E-commerce may be completed by a presence website for undertaking online transaction. The current study aims to investigate the influence of the quality factor on e-commerce website's uses. The system, information and service are included as quality factors in ecommerce website's uses based on student's perspectives which are investigated. The-155 Students who are registering in MIS class in Management Department of Economics Faculty at Andalas University are encouraged as research respondents and analyzed employing Structural Equation Modeling (SEM) using SmartPLS (Partial Least Square) software. The research result found that only service quality factor had significant influenced on e-commerce website uses. The meantime, system and information quality had not influences significantly. Therefore, this study gives the simple illustration of e-commerce websites uses that website users are more consider about the service quality rather than system and information qualities. Consequently, the companies should be focused on service provided via its websites.

Keywords-component; E-commerce website quality; system quality; information quality; service quality.

I. INTRODUCTION

Nowadays, internet is very familiar in the business activities. Plenty of business information is able to obtain via the internet and the most of the activities in business is heavily dependent on the internet. The use of the Internet has penetrated into many lives, the social, cultural, economic, health, politics, and education. Internet is needed in the exchange of information and communicate quickly with no limit to the territory, space and time. Based on March 2011 data from Internet World Stats, the world's total Internet users is 2.1 billion people with 900 thousand (44%) are Asian Users. Indonesia is the 4th largest country after China, Japan and India in terms of users of Internet services in Asia. Based on the calculation of the Association of Indonesian Internet Service Providers (APJII) there are about 25 million Internet users. The increase of Internet users continues to increase about 25% each year. The increase was due to the ease in controlling the information that was in public hands. As a developing country, Indonesia has 12,000 islands with a

population of 228 million people, 60 percent among the population lives in Java which indicates that the population in Indonesia is not widely dispersed [1]. Indonesia most areas are separated by oceans and seas. Therefore, the question of geographical problem is a complicated issue in Indonesia. Emerging e-commerce provides an opportunity intelligently to solve problems concerning the geographical problem. In particular, in business activities with the aim of different places in the presence of e-commerce will be an opportunity for business enterprises that have a geographical problem in marketing activities [2].

Using e-commerce, companies need to be supplemented to the application site. Website is also identified as one of the types of information systems and IT applications required for businesses using the internet. The e-commerce website is a technical aspect of the activities of e-commerce firms [3].

In this article will discuss the influence of quality factors in using of e-commerce website. Therefore, a website needs a reliable quality that can meet the expectations of users when using it. The quality of a website is to have a role when users access the site. Quality factors of e-commerce websites consists of systems, information, and services quality

II. LITERATURE REVIEW

A. Principal Theory

There are many prior studies related to the theory of adoption e-commerce. The study is identified as Reasoned Theory of Action (TRA), Theory of Planned Behavior (TPB) and Technological Acceptance Model (TAM). In following paragraph discuss about these theories.

TRA was first generated by Ajzen [4]. This theory was developed using the basic assumption that humans behave in ways that consciously and consider all available information. In this TRA concept, Ajzen [4] states that a person's intention performs a behavior determine to do or not do the behavior.

Theory of Planned Behavior (TPB) is a further development of the TRA. Ajzen [4] added the construct that does not exist in the TRA, which is perceived behavior control (Perceived Behavioral Control). This construct was added in an effort to understand the limitations of the individual in order to perform a particular behavior [5]. In

other words, a behavior is not only determined by the attitude and subjective norm alone, but also the individual's perception of control that can be done to stem from his belief in the control (Control Beliefs).

The next theory used is Technology Acceptance Model (TAM). Technology Acceptance Model (TAM) is a model developed by Davis [6] to explain the acceptance of the technology used. In formulating the TAM, Davis uses TRA as a theoretical foundation but does not accommodate all the components of the theory of TRA. This theory makes the model's behavior as a function of behavioral objectives. The goal behavior is determined by the attitude of the behavior. The factors affect the user's perception toward acceptable IT are usefulness and ease of use. The usefulness is identified as reasonable actions in the context of IT used, and its benefits. Thus ease of use of IT makes the act of that person can accept the use of IT. TAM model developed from psychological theory to explain the behavior of computer users, which is based on belief, attitude, intensity and relationship of user behavior. The purpose of this model explains the main factors of the IT user behavior, acceptance of use of IT itself.

There are five constructs that have been modified from previous TAM research model [6], namely: (1) Perceptions about ease of use (Perceived Ease of Use); Ease of use is described as an ease of understanding and intuitive operation which makes it easy to read or understand and use as well would be free of effort. (2) The perception of usefulness (Perceived Usefulness). That is stated level of confidence that the use of new technology will enhance the goal. (3) Attitude of use (Attitude toward Using). That is the attitude of users towards the use of new technologies. (4) Conduct to keep using (Behavioral Intention to Use). The user's behavior toward the continued use of a new technology is considered beneficial. (5) Condition of real use of the system (Actual System Usage). The users actually use the new technology actually feeling the benefits.

B. Website for E-commerce

The use of internet in business activities especially doing business transactions is namely E-commerce. E-commerce activity is able to operate using the company's website as tool in a cyber business. The terms used for a website such as homepage, hyperlink, image map, web browser, webpage, or www (World Wide Web) are often interchangeable[7]. The website has been defined as the e-commerce application of network systems and as an important phenomenon over the past decade [3]. In spite of the failure of dot.com activities during 2000-2001[8], world wide web activities are still booming, in particular as a hunt for new customers [9], a virtual market and as a marketing communication tool [10].

A review of the related literature surfaced numerous definitions for websites. In some instances, 'website' was defined as a collection of 'pages' or files linked together

(<http://www.getnetwise.org>), as a document written using Hypertext Markup Language (HTML) and as a unique address (Uniform Resource Locator - URL). Websites also contain texts, graphics, [hyperlinks](https://www.namesecure.com) (<https://www.namesecure.com>) and navigational facilities for users to move within the site 24 hours a day (www.i-stt.com/resources/glossary/W.html). Its clarified the definition of websites as the interface in representing a user's presence on the internet using text, graphics, animation and hyperlinks.

Using the term 'web information system' (WIS) as a surrogate for 'website'. There is defined web information system as 'a computer-supported information system, utilising technology, and accessed by the majority of its users via a browser' [11]. Using the global network and hypermedia information systems for information, education, entertainment, e-business, and e-commerce are also website descriptions [7]. Accordingly, websites as a hypermedia information system may be explained as: (1) 'many-to-many communication' which incorporates interactivity with people and computers; (2) 'flow' which represents network navigation; and (3) 'experiential and goal-directed behaviours' which refers to extrinsic and intrinsic motivation. Therefore, according to these definitions, the operational definition of websites for this study can be developed as a collection of 'pages' or 'files' of the hypermedia computer-mediated environment provided by companies, organisations and any business organisations in facilitating 24-hour communication with users and consumers.

C. Website Quality

Quality of website is identified as a success measurement employing e-commerce. It can be regarded as a very powerful tool in the effort to maintain a company's website. Use of the website will be associated with good quality. The quality in question has three factors, namely the quality of the system, the quality of information and quality of service [11], [9], [12], [14]:

1. *System Quality*; The ability of the system as a given site, such as ease of use (ease of use), fast navigation within the website, customization, loading time is not disappointing, and the entertainment provided [7].
2. *Information Quality*; The quality of the website provided information also contributed to a quality website. The quality of information inside the website can be dynamic content, personalization, accuracy, up-to-date and completeness [12], [14], [11].
3. *Service Quality*; Quality of service provided will also be very influential website is also on the level of usage. Website service quality is the extent to which the response can be given by users, empathy, warranties and service after purchase [11].

C. Hypotesis

Hypothesis 1: The quality of system will influence significantly the use of ecommerce website.

Hypothesis 2: The quality of information will influence significantly the use of ecommerce website.

Hypothesis 3: Quality of service will be influence significantly the use of ecommerce website.

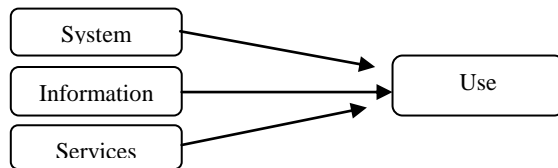


Figure 1. Research Model

III. RESEARCH METHODOLOGY

The current research employs the quantitative methods of explanatory research in a field survey research. Such this study aims to test empirically, that quantitative study using statistical analysis is more suitable. Additionally, the study examines and explains the relationships and influences between variables of website success model. Running the quantitative approach, the survey using questionnaires obtain primary data from the users of e-commerce website was undertaken.

This study made use of the deductive approach and an explanatory study indicated by the quantitative method. The data obtained was derived from individual or student perspectives. The undergraduate students in Management Department of Economics Faculty in Andalas University, Padang were invited. Undergraduate students were believed that they were very familiar with internet/ecommerce uses in particular. The students were directed to access several ecommerce website for a week hence fulfills the questionnaires' freely and confidently. During fulfill the questionnaires, they images to purchase a certain thing of the mother gift [13]. Finally, the 115 research respondents were gained.

The data analysis is conducted by employing Structural Equation Modeling (SEM) using SmartPLS program (Partial Least Square). In SEM process, Model and Structural Measurement was conducted as validity and reliability test also significant relationships for hypothesis.

IV. RESEARCH RESULTS

The research was conducted to test 3 hypotheses in website success factors employing quality and use. The research respondent is a-115 Management students who were chosen using a purposive sampling. Data obtained

employing survey technique and data processed using SPSS for Windows and SmartPLS 15:00.

A. Respondent data

Most of the respondents of this study were women (52.2%). 89.03% of respondents aged between 20-25 years. 50.97% of the respondents came from the city of Padang and most of respondents' working parents work as Civil Servants (46.45%). Judging from the use of the Internet, 29.68% of respondents had used the Internet more than 5 years and an average of 1-2 hours using the internet per day (45.16%). The majority of respondents (51%) aim to use the Internet to find lecture material with the most frequently access the Internet are Internet cafés. Among the respondents, as much as 24.3% access www.google.com, www.facebook.com, and www.yahoo.com. For online shopping experience, the majority of respondents and only interested but have not purchased yet (61.9%). During use the internet, goods or services that are frequently viewed area of music and video respondents (25.35%). And according to them, it's a great site like www.google.com website (26.24%). Of the many features available on e-commerce website, online booking, search facilities, company profile, space comments, and the choice of language are the most needed features.

B. Data Analysis using SEM/SmartPLS

This study uses Structural Equation Modeling (SEM) using SmartPLS software. Data analysis of SmartPLS consists of two steps. The first step is the measurement model to test reliability and validity. This model may work well for the match with the problem of reliability and validity [14]. In the second step, the structural measurement is operated again to test the hypothesis.

1). Measurement Model

Validity Test

Testing the validity of this study, with reflexive indicator can be seen from the correlation between the score of the item / indicator with its score construct. Individual indicators are considered valid if it has a correlation value above 0.70. However, for loading 0.50 - 0.60 are deemed acceptable by looking at the output of the correlation between indicators and its constructs.

Cross loadings are useful to assess whether the constructs have adequate discriminant validity comparing the correlation of indicators. If the correlation of construct indicators have higher values than the correlation of these indicators of other constructs. Then it is said the construct identify as high discriminant validity.

The Table 1. Illustrate the loading score and Square Root of Average (AVE). The loading scores can be concluded that the indicators of the each construct validity convergent provide high value all of the above 0.60. So is the value of cross loading showed good discriminant validity. In the meantime, all AVE scores are identified as

the above of 0.5 with the meaning good discriminant validity as well.

TABLE 1. LOADINGS AND AVERAGE VARIANCE EXTRACT (AVE)

<i>Unobserved Variable</i>	<i>Observed Variabel</i>	<i>Loading</i>	<i>AVE</i>
System Quality	Facilities	0.645192	0.547746
	Speed	0.666787	
	Pleasure	0.753189	
	Usability	0.873391	
Information Quality	Completeness	0.686981	0.592383
	Up to-date	0.764103	
	Reliability	0.850351	
	Acuracy	0.785779	
	Worth	0.831617	
	Suit forms	0.682912	
Service Quality	Responsiveness	0.679840	0.513331
	Service prosedure	0.648065	
	After sales Service	0.766236	
	Delevery option	0.744237	
	Delevery Promise	0.728928	
	Ansurance delevery	0.691743	
	Delevery time	0.780500	
	Product sample	0.705401	
	Decrease uncertanty	0.781633	
	Freindly	0.618521	
Usefulness (Use)	Best decision	0.647086	0.516608
	Wanted product	0.604400	
	Save money	0.642095	
	speedy work	0.695657	
	increase performance	0.755244	
	increase productivity	0.863821	
	work quality	0.844500	
	easy work	0.650276	

Another method to assess (Table 2) the discriminant validity is to compare the Square Root of Average (AVE) for each construct with the correlations between the constructs with other constructs in the model. The model has sufficient discriminant validity since the root of AVE for each construct was greater than the correlation between the construct and other constructs.

TABLE 2. CORRELATION MATRIX OF LATENT VARIABLES
(Square root of AVE in diagonal)

Construct	Information Quality	Service Quality	System Quality	Use
Information Quality	0.769664			
Service Quality	0.531619	0.716471		
System Quality	0.526057	0.598578	0.740098	
Use	0.395721	0.497356	0.421202	0.718754

If the value is the root of AVE is higher than the correlations between other constructs, it can be concluded constructs have a good level of validity. Thus, it can be concluded that each construct has a high validity. It can be seen from the root of AVE is higher than the value of the correlation between other constructs.

Reability Test

The Method assesses the reability in this study using cronbach alpha as in the following Table 3. The construct can be said to be good if the value of its reliability with over than 0.70. It can be concluded that each of its reliability as a good because its value is more than 0.70.

TABLE 3. CRONBACH ALPA

Construct	Cronbachs Alpha
Information Quality	0.861381
Service Quality	0.893974
System Quality	0.728940
Use	0.863455

b). Structural model

Measuring the model as Inner model is to look at the relationship between the construct and significance value, as in Table 4. Testing the relationship between the constructs showed only constructs the quality of service usage, which is significant website uses at the 0.05 (T count greater than 1.3) while the quality of information and systems did not affect the use of IT (T count lower than 1.3).

TABLE 4. STRUKTURAL MODEL

Hypoteses Testing	Path Coefficient	Observed t-value	Sig. Level
System Quality (H1)	0.146950	1.164139	Not Significant
Information Quality (H2)	0.140476	1.160969	Not Significant
Service Quality (H3)	0.334715	2.495549	Significant

V. DISCUSSION

This study examined the effect of the quality of system, information and services on the use of e-commerce website. Based on the table 4, the hypothesis 1 and 2 are not accepted, while hypothesis 3 is accepted. The quality of service is considered to have an influence on the use of e-commerce website. These results are consistent with research conducted by [11], which states that service quality is significantly affected by the use of e-commerce website. The use of website will be accessed by user where its website provides numerous service qualities.

These prior researchers thought that if the quality of services provided by e-commerce websites such as post-sales service through the website, will result in the use of a person to use the website again. The more often a person (users) are getting good service, will continue to use e-commerce website and grow the benefits of the use of the website. In this study with college students as research respondents, it can be concluded that the students really liked and prioritize websites that provide appropriate services when buying a product or service offered. It also

explains that the respondents are much needed services more when shopping online. This means, the respondent has accepted the use of IT in particular e-commerce website and has benefited from its use.

VI. CONCLUSION

The quality of information and systems e-commerce websites on a student majoring in management does not affect the use of e-commerce website directly. However, the quality of service affects the use of e-commerce website directly and significantly. From this study can be concluded that service quality affects the use of e-commerce website services rendered prior to the manager of the website. Users who are already getting a satisfactory service, meaning users receive from the use of e-commerce website so that users will continue to use the website and has benefited from its use.

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